

Sub B1

14. An electroporation chamber for poration of biological particles, comprising:
walls defining a fluid flow path;
electrodes disposed along sides of the fluid flow path, the electrodes being in
electrical communication with a source of electrical energy, whereby
biological particles moving along the fluid flow path are subjected to an
electrical field; and
the apparatus being characterized by at least one of the walls defining the fluid
flow path being elastically deformable and at least another one of the walls
defining the fluid flow path being substantially rigid.

Sub C1

15. The electroporation chamber of Claim 14, wherein the electrical energy is
pulsed.

16. The electroporation chamber of Claim 14, wherein the electrical energy is a
variable flux.

17. The electroporation chamber of Claim 14, wherein the at least one of the walls
defining the fluid flow path being comprised of a deformable, elastic
material comprises two of the walls being comprised of a deformable,
elastic material.

18. The electroporation chamber of Claim 14, wherein the electrodes comprise
continuous band electrodes.

Sub C1

19. The electroporation chamber of Claim 14, wherein the electrodes further
function as a cooling device.

Sub B2

20. An electroporation chamber for poration of biological particles, the electroporation chamber being removably mounted to a support member, the electroporation chamber comprising:

walls defining a fluid flow path;

electrodes disposed along sides of the fluid flow path, the electrodes being in electrical communication with a source of electrical energy, whereby biological particles moving along the fluid flow path are subjected to an electrical field and

a mechanism for breaking the electrodes prior to the apparatus being removed from the support member whereby the apparatus cannot be re-used.

Sub C1

21. The electroporation chamber of Claim 20, wherein:

the electrodes are in electrical communication with a source of energy by a spindle,

the electrodes being wrapped around at least a portion of the periphery of an associated spindle; and wherein the spindles are rotated so as to stretch the electrodes beyond their tensile limits, thereby breaking the electrodes and rendering them electrically inoperative.

Sub B3

22. An electroporation chamber for poration of biological particles, comprising:

walls defining a fluid flow path;

electrodes disposed along sides of the fluid flow path, the electrodes being in electrical communication with a source of electrical energy, whereby biological particles moving along the fluid flow path are subjected to an electrical field;

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a pump for moving the biological particles along the fluid flow path; and
a controller responsive to the rate at which the pump moves the biological
particles along the fluid flow path and to the interval between pulses of
electrical energy.

Sub A2

Sub C1

23. The electroporation chamber of Claim 22, wherein the controller regulates the
rate at which the pump moves the biological particles along the fluid flow
path.

24. The electroporation chamber of Claim 22, wherein the controller regulates the
interval between pulses of electrical energy.

Sub B4

25. An electroporation chamber for poration of biological particles, comprising:
walls defining a fluid flow path;
electrodes disposed along sides of the fluid flow path, the electrodes being in
electrical communication with a source of electrical energy, whereby
biological particles moving along the fluid flow path are subjected to an
electrical field.

26. The electroporation chamber of Claim 25, wherein the electrical energy is
pulsed.

27. The electroporation chamber of Claim 25, wherein the electrical energy is a
variable flux.

28. The electroporation chamber of ~~Claim 25~~ 25, wherein the electrodes comprise